

Stream Gage Task Force  
September 15, 2006

Report  
Appendix A

| <b>Table A1 - NH SGN Data Uses for Existing Gages</b> |                  |                                   |   | For each gage, the count of the number of times a use was identified by users |                      |                   |   |   |   |  |                                       |
|---|------------------|-----------------------------------|---|---|----------------------|-------------------|---|---|---|--|---------------------------------------|
|   |                  |                                   |   | Real-time Flow Data Needs   |                      |                   |   | Historical Flow Data Needs              |   |  |                                       |
|   |                  |                                   |   | Flood control and response  | Reservoir management | Flow availability | Water related permit conditions implementation and monitoring | Water availability and flow assessments | Hydrologic trends and statistical assessments such as climate change, and regression analysis for ungaged streams | Hydraulic design and geomorphology studies | Waste and Water Chemistry assessments |
| Gage Status   | HUC-10 Index (6) | USGS or NHDES Gage Station number | Existing gage names   |   |                      |                   |   |   |   |  |                                       |
| Continuous (1)  | A3               | <a href="#">01052500</a>          | Diamond River near Wentworth Location, NH                           | 1   | 0                    | 2                 | 2   | 3                                       | 7   | 4  | 1                                     |
| Continuous  | A5               | <a href="#">01053500</a>          | Androscoggin River at Errol, NH                                     | 0   | 1                    | 3                 | 4   | 4                                       | 4   | 2  | 2                                     |
| Continuous  | A5               | <a href="#">01054000</a>          | Androscoggin River near Gorham, NH                                  | 0   | 1                    | 3                 | 4   | 4                                       | 4   | 2  | 2                                     |
| HDCN (2)  | C1               | <a href="#">SFMNH</a>             | Milton 3-Ponds (formerly 01072100 Salmon Falls River at Milton, NH) | 2   | 2                    | 2                 | 4   | 3                                       | 4   | 2  | 3                                     |
| Continuous  | C2               | <a href="#">01072800</a>          | COCHECO RIVER NEAR ROCHESTER, NH.                                   | 1   | 0                    | 3                 | 4   | 4                                       | 4   | 2  | 3                                     |
| Closing - Continuous(3)                               | C2               | <a href="#">01072870</a>          | ISINGLASS R AT ROCHESTER NECK RD, NR DOVER, NH                      | 0   | 0                    | 3                 | 3   | 7                                       | 5   | 4  | 3                                     |
| Closing - Continuous                                  | C3               | <a href="#">01073460</a>          | NORTH RIVER ABOVE NH 125, NEAR LEE, NH                              | 0   | 0                    | 2                 | 3   | 6                                       | 6   | 5  | 2                                     |
| Continuous  | C3               | <a href="#">01073500</a>          | LAMPREY RIVER NEAR NEWMARKET, NH                                    | 2   | 0                    | 5                 | 7   | 8                                       | 6   | 5  | 4                                     |
| Continuous  | C4               | <a href="#">01073587</a>          | EXETER RIVER AT HAIGH ROAD, NEAR BRENTWOOD, NH                      | 2   | 0                    | 3                 | 4   | 7                                       | 5   | 4  | 3                                     |

Appendix A – Table 1 – Existing Gages Data Use

|                         |      |                          |   |   |   |   |   |   |   |   |   |
|-------------------------|------|--------------------------|---|---|---|---|---|---|---|---|---|
| Continuous              | C5   | <a href="#">01073000</a> | OYSTER RIVER NEAR DURHAM, NH  | 0 | 0 | 3 | 3 | 4 | 7 | 4 | 3 |
| Closing -<br>Continuous | C5   | <a href="#">01073785</a> | WINNICUT RIVER AT GREENLAND, NR<br>PORTSMOUTH, NH                     | 0 | 0 | 2 | 2 | 4 | 5 | 4 | 1 |
| Closing -<br>Continuous | C6   | <a href="#">01073822</a> | LITTLE RIVER AT WOODLAND ROAD,<br>NEAR HAMPTON, NH                    | 0 | 0 | 2 | 2 | 4 | 5 | 4 | 1 |
| Continuous              | Ct10 | <a href="#">01131500</a> | CONNECTICUT RIVER NEAR DALTON, NH                                     | 2 | 2 | 2 | 5 | 6 | 5 | 3 | 3 |
| Continuous              | Ct12 | <a href="#">01137500</a> | AMMONOOSUC RIVER AT BETHLEHEM<br>JUNCTION, NH                         | 1 | 0 | 3 | 4 | 5 | 9 | 5 | 4 |
| Continuous              | Ct14 | <a href="#">01138500</a> | CONNECTICUT RIVER AT WELLS RIVER,<br>VT                               | 3 | 3 | 4 | 5 | 6 | 5 | 3 | 4 |
| HDCN                    | Ct17 | <a href="#">MCAN3</a>    | Mascoma Lake (formerly 01150500 Mascoma<br>River at Mascoma, NH)      | 2 | 2 | 3 | 3 | 4 | 5 | 3 | 4 |
| HDCN                    | Ct17 | <a href="#">WCNN3</a>    | Mascoma River (formerly 01145000 Mascoma<br>River at West Canaan, NH) | 1 | 2 | 2 | 3 | 5 | 6 | 4 | 2 |
| Continuous              | Ct18 | <a href="#">01144500</a> | CONNECTICUT RIVER AT WEST<br>LEBANON, NH                              | 3 | 3 | 4 | 5 | 7 | 5 | 3 | 4 |
| Continuous              | Ct19 | <a href="#">01152500</a> | SUGAR RIVER AT WEST CLAREMONT, NH                                     | 2 | 1 | 3 | 4 | 5 | 5 | 3 | 4 |
| Continuous              | Ct2  | <a href="#">01129200</a> | CONNECTICUT R BELOW INDIAN STREAM<br>NR PITTSBURG, NH                 | 2 | 3 | 4 | 6 | 7 | 5 | 3 | 3 |
| Continuous              | Ct22 | <a href="#">01154500</a> | CONNECTICUT RIVER AT NORTH<br>WALPOLE, NH                             | 3 | 3 | 4 | 5 | 7 | 5 | 3 | 4 |
| Continuous              | Ct23 | <a href="#">01158000</a> | ASHUELOT RIVER BELOW SURRY MT<br>DAM, NEAR KEENE, NH                  | 3 | 3 | 3 | 5 | 6 | 5 | 3 | 3 |
| Continuous              | Ct24 | <a href="#">01158600</a> | OTTER BROOK BELOW OTTER BROOK<br>DAM, NEAR KEENE, NH                  | 2 | 2 | 2 | 4 | 5 | 5 | 3 | 3 |
| Stage-only (4)          | Ct25 | <a href="#">01158110</a> | ASHUELOT RIVER ABOVE THE BRANCH,<br>AT KEENE, NH (stage only)         | 3 | 3 | 3 | 4 | 5 | 5 | 4 | 3 |
| Continuous              | Ct26 | <a href="#">01160350</a> | ASHUELOT RIVER AT WEST SWANZEY,<br>NH                                 | 3 | 3 | 4 | 5 | 7 | 6 | 5 | 4 |
| Continuous              | Ct26 | <a href="#">01161000</a> | ASHUELOT RIVER AT HINSDALE, NH  | 2 | 2 | 4 | 5 | 7 | 5 | 3 | 4 |
| Continuous              | Ct5  | <a href="#">01129500</a> | CONNECTICUT RIVER AT NORTH<br>STRATFORD, NH                           | 2 | 2 | 4 | 5 | 7 | 6 | 3 | 4 |
| Continuous              | M1   | <a href="#">01074520</a> | EAST BRANCH PEMIGEWASSET RIVER AT<br>LINCOLN, NH                      | 2 | 1 | 3 | 4 | 6 | 9 | 5 | 4 |
| Continuous              | M10  | <a href="#">01081000</a> | WINNIPESAUKEE RIVER AT TILTON, NH                                     | 3 | 2 | 3 | 4 | 6 | 5 | 3 | 4 |
| Continuous              | M11  | <a href="#">01082000</a> | CONTOOCOOK RIVER AT<br>PETERBOROUGH, NH                               | 3 | 3 | 4 | 5 | 7 | 7 | 4 | 4 |

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|                         |     |                           |   |   |   |   |   |   |   |   |   |
|-------------------------|-----|---------------------------|---|---|---|---|---|---|---|---|---|
| PR (5)                  | M11 | <a href="#">01083000</a>  | NUBANUSIT BK BLW MACDOWELL DAM<br>NR PETERBOROUGH NH (partial record) | 2 | 2 | 2 | 4 | 3 | 6 | 2 | 3 |
| Continuous              | M13 | <a href="#">01086000</a>  | WARNER RIVER AT DAVISVILLE, NH  | 2 | 2 | 3 | 4 | 5 | 9 | 5 | 4 |
| PR                      | M14 | <a href="#">01087000</a>  | BLACKWATER RIVER NEAR WEBSTER,<br>NH (partial record)                 | 2 | 2 | 2 | 4 | 4 | 5 | 2 | 2 |
| PR                      | M15 | <a href="#">01085000</a>  | CONTOOCOOK RIVER NEAR HENNIKER,<br>NH (partial record)                | 3 | 2 | 5 | 4 | 5 | 6 | 3 | 3 |
| Continuous              | M15 | <a href="#">01085500</a>  | CONTOOCOOK R BL HOPKINTON DAM AT<br>W HOPKINTON, NH                   | 3 | 3 | 4 | 6 | 6 | 5 | 3 | 4 |
| Stage-only              | M15 | <a href="#">01087850</a>  | CONTOOCOOK RIVER AT RIVER HILL,<br>NEAR PENACOOK, NH (stage only)     | 3 | 3 | 3 | 3 | 5 | 3 | 2 | 2 |
| Continuous              | M18 | <a href="#">01081500</a>  | MERRIMACK RIVER AT FRANKLIN<br>JUNCTION, NH                           | 3 | 3 | 4 | 6 | 7 | 5 | 3 | 4 |
| Continuous              | M19 | <a href="#">01089100</a>  | SOUCOOK RIVER, AT PEMBROKE ROAD,<br>NEAR CONCORD, NH                  | 1 | 0 | 1 | 3 | 5 | 8 | 5 | 3 |
| Continuous              | M2  | <a href="#">01075000</a>  | PEMIGEWASSET RIVER AT WOODSTOCK,<br>NH                                | 3 | 3 | 4 | 5 | 7 | 9 | 5 | 4 |
| Stage-only              | M20 | <a href="#">01088400</a>  | MERRIMACK RIVER AT CONCORD,<br>NH (stage only)                        | 4 | 3 | 2 | 2 | 4 | 3 | 2 | 3 |
| PR                      | M23 | <a href="#">01090800</a>  | PISCATAQUOG RIVER BL EVERETT DAM,<br>NR E WEARE, NH (partial record)  | 3 | 3 | 3 | 4 | 5 | 4 | 2 | 2 |
| PR                      | M23 | <a href="#">01091500</a>  | PISCATAQUOG RIVER NEAR GOFFSTOWN,<br>NH (partial record)              | 3 | 3 | 4 | 5 | 5 | 5 | 3 | 4 |
| Continuous              | M25 | <a href="#">01092000</a>  | MERRIMACK R NR GOFFS FALLS, BELOW<br>MANCHESTER, NH                   | 4 | 3 | 4 | 5 | 7 | 5 | 3 | 5 |
| Continuous              | M26 | <a href="#">01094000</a>  | SOUHEGAN RIVER AT MERRIMACK, NH                                       | 3 | 2 | 4 | 5 | 8 | 5 | 4 | 4 |
| Continuous              | M28 | <a href="#">01100505</a>  | SPICKET RIVER AT NORTH SALEM, NH                                      | 1 | 1 | 2 | 2 | 5 | 4 | 3 | 2 |
| PR                      | M28 | <a href="#">01100561</a>  | SPICKET RIVER NEAR METHUEN, MA<br>(partial record)                    | 2 | 2 | 1 | 2 | 5 | 4 | 3 | 3 |
| Closing -<br>Continuous | M28 | <a href="#">011005605</a> | POLICY BR @ I-93N REST STOP ENT RAMP,<br>NR SALEM, NH                 | 0 | 0 | 1 | 2 | 5 | 4 | 3 | 3 |
| Continuous              | M29 | <a href="#">010965852</a> | BEAVER BROOK AT NORTH PELHAM, NH                                      | 0 | 0 | 2 | 2 | 5 | 7 | 5 | 3 |
| Continuous              | M3  | <a href="#">01076000</a>  | BAKER RIVER NEAR RUMNEY, NH   | 3 | 1 | 3 | 3 | 5 | 8 | 5 | 3 |
| Continuous              | M4  | <a href="#">01076500</a>  | PEMIGEWASSET RIVER AT PLYMOUTH,<br>NH                                 | 3 | 2 | 4 | 5 | 7 | 8 | 5 | 4 |
| HDCN                    | M5  | <a href="#">ASHNH</a>     | Squam River at Ashland, N.H. (formerly                                | 2 | 2 | 3 | 3 | 5 | 5 | 3 | 4 |

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|            |    |                          |   |   |   |   |   |   |   |   |   |
|------------|----|--------------------------|---|---|---|---|---|---|---|---|---|
|            |    |                          | 01077000)   |   |   |   |   |   |   |   |   |
| HDCN       | M6 | <a href="#">NFLNH</a>    | Newfound Lake Dam (formerly 01077500<br>Newfound Lake Near Bristol, NH) | 2 | 2 | 1 | 2 | 4 | 4 | 2 | 2 |
| Continuous | M7 | <a href="#">01078000</a> | SMITH RIVER NEAR BRISTOL, NH  | 2 | 1 | 2 | 3 | 5 | 8 | 5 | 3 |
| HDCN       | M9 | <a href="#">LKPN3</a>    | Lake Winnepesaukee Outlet at Lakeport, N.H.<br>(formerly 01080500)      | 2 | 2 | 1 | 3 | 4 | 4 | 3 | 3 |
| Continuous | S3 | <a href="#">01064500</a> | Saco River near Conway, NH  | 2 | 0 | 4 | 4 | 7 | 9 | 4 | 4 |
| Continuous | S5 | <a href="#">01064801</a> | BEARCAMP RIVER AT SOUTH<br>TAMWORTH, NH                                 | 2 | 1 | 2 | 2 | 5 | 7 | 5 | 3 |
| HDCN       | S8 | <a href="#">OSRNH</a>    | Ossipee River at Effingham Falls, N.H. (formerly<br>01065000)           | 2 | 2 | 2 | 2 | 5 | 5 | 3 | 3 |

(6) Index - for this study USGS HUC-10 numbers were renamed with the first letter of their major basin and sequential numbering.

A=Androscoggin, C=Coastal, Ct=Connecticut, M=Merrimack, S=Saco

- (1) Continuous = USGS continuous record gage (measurements accurate for full range of high and low flows)
- (2) HDCN = Hydrologic Data Collection Network (NHDES Dam Bureau station)
- (3) Closing - Continuous = Continuous gages without funding after either 2006 or 2007
- (4) Stage-only = USGS water height measurement station
- (5) PR = USGS partial record gage (measurements accurate only for some of the data such as the high or low flows)

**Table A2 - NH SGN User Rankings for Existing Gages**

| Table A2 - NH SGN User Rankings for Existing Gages |    |                          |   | For each gage the user identified ranking of gage for their use                |                  |                                   |                         |                |                                      |                  |                |                            |                          |                                |                    |                      |                  |   | Summary          |                           |
|--|----|--------------------------|---|--|------------------|-----------------------------------|-------------------------|----------------|--------------------------------------|------------------|----------------|----------------------------|--------------------------|--------------------------------|--------------------|----------------------|------------------|---|------------------|---------------------------|
|  |    |                          |   | Gage ranking for this Data Use: 1) Vital; 2) Supporting; 3) Better gage needed |                  |                                   |                         |                |                                      |                  |                |                            |                          |                                |                    |                      |                  |   |                  |                           |
|  |    |                          |   | Gage Status  | HUC-10 Index (6) | USGS or NHDES Gage Station number | Names of existing gages | NH Fish & Game | NHDES Waste Water Engineering Bureau | Consulting (NAI) | NH Stream Team | US Army Corps of Engineers | NH InStream Flow Program | NH Watershed Management Bureau | US Fish & Wildlife | US Geological Survey | NHDES Dam Bureau | Rivers Management Local Advisory Committees | University of NH | Plymouth State University |
| Continuous (1)                                     | A3 | <a href="#">01052500</a> | Diamond River near Wentworth Location, NH                           | 1  |                  | 1                                 | 1                       |                |                                      |                  | 1              | 1                          | 2                        |                                |                    |                      | 1                | 7   | 6                |                           |
| Continuous   | A5 | <a href="#">01053500</a> | Androscoggin River at Errol, NH                                     | 1  | 2                | 2                                 |                         |                |                                      | 2                | 1              | 1                          | 2                        |                                |                    |                      | 1                | 8   | 4                |                           |
| Continuous   | A5 | <a href="#">01054000</a> | Androscoggin River near Gorham, NH                                  | 1  | 1                | 2                                 |                         |                |                                      | 2                | 1              | 1                          | 2                        |                                |                    |                      | 1                | 8   | 5                |                           |
| HDCN (2)   | C1 | <a href="#">SFMNH</a>    | Milton 3-Ponds (formerly 01072100 Salmon Falls River at Milton, NH) | 1  | 1                |                                   |                         |                |                                      |                  | 1              | 1                          | 1                        |                                |                    |                      | 1                | 6   | 6                |                           |
| Continuous   | C2 | <a href="#">01072800</a> | COCHECO RIVER NEAR ROCHESTER, NH.                                   | 1  | 1                | 2                                 |                         |                |                                      | 1                | 1              | 1                          | 2                        |                                |                    |                      | 1                | 8   | 6                |                           |
| Closing - Continuous(3)                            | C2 | <a href="#">01072870</a> | ISINGLASS R AT ROCHESTER NECK RD, NR DOVER, NH                      | 1  |                  | 1                                 |                         |                | 1                                    | 1                |                | 1                          | 2                        | 1                              |                    |                      | 1                | 8   | 7                |                           |
| Closing - Continuous                               | C3 | <a href="#">01073460</a> | NORTH RIVER ABOVE NH 125, NEAR LEE, NH                              | 1  |                  | 1                                 |                         |                | 2                                    | 2                |                | 2                          | 2                        | 2                              | 1                  |                      | 1                | 9   | 4                |                           |
| Continuous   | C3 | <a href="#">01073500</a> | LAMPREY RIVER NEAR NEWMARKET, NH                                    | 1  | 1                | 1                                 |                         |                | 1                                    | 1                | 1              | 1                          | 2                        | 1                              | 1                  |                      | 1                | 11  | 10               |                           |
| Continuous   | C4 | <a href="#">1073587</a>  | EXETER RIVER AT HAIGH ROAD, NEAR BRENTWOOD, NH                      | 1  |                  | 1                                 |                         |                | 1                                    | 1                | 1              | 1                          | 2                        | 1                              |                    |                      | 1                | 9   | 8                |                           |
| Continuous   | C5 | <a href="#">01073000</a> | OYSTER RIVER NEAR DURHAM, NH  | 1  | 1                | 2                                 | 1                       |                |                                      | 2                |                | 1                          | 2                        |                                | 1                  |                      | 1                | 9   | 6                |                           |
| Closing - Continuous                               | C5 | <a href="#">1073785</a>  | WINNICUT RIVER AT GREENLAND, NR PORTSMOUTH, NH                      | 1  |                  | 2                                 |                         |                |                                      | 1                | 2              | 2                          | 2                        |                                |                    |                      | 1                | 7   | 3                |                           |

Appendix A – Table 2 – Existing Gages User Rankings

|                      |      |                          |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |    |
|----------------------|------|--------------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|
| Closing - Continuous | C6   | <a href="#">1073822</a>  | LITTLE RIVER AT WOODLAND ROAD, NEAR HAMPTON, NH                    | 1 |   | 2 |   |   |   | 2 |   | 3 | 2 |   |   |   | 1 | 6  | 2  |
| Continuous           | Ct10 | <a href="#">01131500</a> | CONNECTICUT RIVER NEAR DALTON, NH                                  | 1 |   |   |   | 1 | 1 | 1 | 1 | 1 | 2 | 1 |   |   | 1 | 9  | 8  |
| Continuous           | Ct12 | <a href="#">01137500</a> | AMMONOOSUC RIVER AT BETHLEHEM JUNCTION, NH                         | 1 | 1 | 1 | 1 | 1 |   | 2 | 1 | 1 | 2 | 2 | 1 |   | 1 | 12 | 9  |
| Continuous           | Ct14 | <a href="#">01138500</a> | CONNECTICUT RIVER AT WELLS RIVER, VT                               | 1 | 1 | 1 |   | 1 | 1 | 2 | 1 | 1 | 2 | 1 |   |   | 1 | 11 | 9  |
| HDCN                 | Ct17 | <a href="#">MCAN3</a>    | Mascoma Lake (formerly 01150500 Mascoma River at Mascoma, NH)      | 1 | 1 | 1 |   |   |   |   |   | 1 | 1 | 2 |   |   | 1 | 7  | 6  |
| HDCN                 | Ct17 | <a href="#">WCNN3</a>    | Mascoma River (formerly 01145000 Mascoma River at West Canaan, NH) | 1 |   | 1 | 1 |   |   |   | 1 | 2 | 1 | 2 |   |   | 1 | 8  | 6  |
| Continuous           | Ct18 | <a href="#">01144500</a> | CONNECTICUT RIVER AT WEST LEBANON, NH                              | 1 | 1 | 1 |   | 1 | 1 | 2 | 1 | 1 | 2 | 1 |   |   | 1 | 11 | 9  |
| Continuous           | Ct19 | <a href="#">01152500</a> | SUGAR RIVER AT WEST CLAREMONT, NH                                  | 1 | 1 | 1 |   |   |   | 2 | 1 | 1 | 2 | 2 |   |   | 1 | 9  | 6  |
| Continuous           | Ct2  | <a href="#">01129200</a> | CONNECTICUT R BELOW INDIAN STREAM NR PITTSBURG, NH                 | 1 | 1 | 1 |   |   | 1 | 1 | 1 | 1 | 2 | 1 |   |   | 1 | 10 | 9  |
| Continuous           | Ct22 | <a href="#">01154500</a> | CONNECTICUT RIVER AT NORTH WALPOLE, NH                             | 1 | 1 | 1 |   | 1 | 1 | 1 | 1 | 1 | 2 | 1 |   |   | 1 | 11 | 10 |
| Continuous           | Ct23 | <a href="#">01158000</a> | ASHUELOT RIVER BELOW SURRY MT DAM, NEAR KEENE, NH                  | 1 | 1 |   |   | 1 | 1 | 2 | 1 | 1 | 2 | 1 |   |   | 1 | 10 | 8  |
| Continuous           | Ct24 | <a href="#">01158600</a> | OTTER BROOK BELOW OTTER BROOK DAM, NEAR KEENE, NH                  | 1 | 1 |   |   | 1 |   | 2 | 1 | 1 | 2 | 2 | 1 |   | 1 | 10 | 7  |
| Stage-only (4)       | Ct25 | <a href="#">01158110</a> | ASHUELOT RIVER ABOVE THE BRANCH, AT KEENE, NH (stage only)         | 1 |   | 1 |   | 1 |   |   | 1 | 2 | 2 | 1 |   |   | 1 | 8  | 6  |
| Continuous           | Ct26 | <a href="#">01160350</a> | ASHUELOT RIVER AT WEST SWANZEY, NH                                 | 1 | 1 | 1 |   | 1 | 1 | 2 | 1 | 1 | 2 | 1 |   |   | 1 | 11 | 9  |
| Continuous           | Ct26 | <a href="#">01161000</a> | ASHUELOT RIVER AT HINSDALE, NH                                     | 1 | 1 | 1 |   |   | 1 | 2 | 1 | 1 | 2 | 1 |   |   | 1 | 10 | 8  |
| Continuous           | Ct5  | <a href="#">01129500</a> | CONNECTICUT RIVER AT NORTH STRATFORD, NH                           | 1 | 1 | 1 |   | 1 | 1 | 1 | 1 | 1 | 2 | 1 |   |   | 1 | 11 | 10 |
| Continuous           | M1   | <a href="#">01074520</a> | EAST BRANCH PEMIGEWASSET RIVER AT LINCOLN, NH                      | 1 | 1 | 1 | 1 | 1 |   | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 13 | 11 |
| Continuous           | M10  | <a href="#">01081000</a> | WINNIPESAUKEE RIVER AT   | 1 | 1 | 1 |   | 1 | 1 | 2 | 1 | 1 | 1 | 2 |   | 1 | 1 | 12 | 10 |

Appendix A – Table 2 – Existing Gages User Rankings

|            |     |                          | TILTON, NH   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |    |
|------------|-----|--------------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|
| Continuous | M11 | <a href="#">01082000</a> | CONTOOCCOOK RIVER AT PETERBOROUGH, NH                              | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |   |   | 1 | 12 | 10 |
| PR (5)     | M11 | <a href="#">01083000</a> | NUBANUSIT BK BLW MACDOWELL DAM NR PETERBOROUGH NH (partial record) | 1 | 1 |   | 1 |   | 1 |   | 1 | 1 | 2 | 2 |   |   | 1 | 8  | 6  |
| Continuous | M13 | <a href="#">01086000</a> | WARNER RIVER AT DAVISVILLE, NH                                     | 1 | 1 | 1 | 1 | 1 | 3 |   | 2 | 1 | 2 | 2 |   |   | 1 | 11 | 7  |
| PR         | M14 | <a href="#">01087000</a> | BLACKWATER RIVER NEAR WEBSTER, NH (partial record)                 | 1 |   | 1 |   | 1 |   |   | 1 | 1 | 2 | 2 |   |   | 1 | 8  | 6  |
| PR         | M15 | <a href="#">01085000</a> | CONTOOCCOOK RIVER NEAR HENNIKER, NH (partial record)               | 1 | 1 | 1 |   | 1 |   |   | 1 | 2 | 2 | 1 |   |   | 1 | 9  | 7  |
| Continuous | M15 | <a href="#">01085500</a> | CONTOOCCOOK R BL HOPKINTON DAM AT W HOPKINTON, NH                  | 1 | 1 | 1 |   | 1 | 1 |   | 1 | 1 | 2 | 1 |   |   | 1 | 10 | 9  |
| Stage-only | M15 | <a href="#">01087850</a> | CONTOOCCOOK RIVER AT RIVER HILL, NEAR PENACOOK, NH (stage only)    | 1 |   | 1 |   | 1 |   | 2 | 2 | 3 | 2 | 1 |   |   | 1 | 9  | 5  |
| Continuous | M18 | <a href="#">01081500</a> | MERRIMACK RIVER AT FRANKLIN JUNCTION, NH                           | 1 | 1 | 1 |   | 1 | 1 | 2 | 1 | 1 | 2 | 1 |   |   | 1 | 11 | 9  |
| Continuous | M19 | <a href="#">01089100</a> | SOUCCOOK RIVER, AT PEMBROKE ROAD, NEAR CONCORD, NH                 | 1 |   | 1 | 1 |   |   | 2 | 2 | 1 | 2 | 2 |   |   | 1 | 9  | 5  |
| Continuous | M2  | <a href="#">1075000</a>  | PEMIGEWASSET RIVER AT WOODSTOCK, NH                                | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 14 | 12 |
| Stage-only | M20 | <a href="#">01088400</a> | MERRIMACK RIVER AT CONCORD, NH (stage only)                        | 1 |   | 1 |   | 1 | 3 | 3 | 2 | 2 | 2 | 1 |   |   | 1 | 10 | 5  |
| PR         | M23 | <a href="#">01090800</a> | PISCATAQUOG RIVER BL EVERETT DAM, NR E WEARE, NH (partial record)  | 1 |   | 1 |   | 1 | 3 |   | 1 | 1 | 2 | 1 |   |   | 1 | 9  | 7  |
| PR         | M23 | <a href="#">01091500</a> | PISCATAQUOG RIVER NEAR GOFFSTOWN, NH (partial record)              | 1 | 2 | 1 |   | 1 | 3 |   | 1 | 1 | 2 | 1 |   |   | 1 | 10 | 7  |
| Continuous | M25 | <a href="#">01092000</a> | MERRIMACK R NR GOFFS FALLS, BELOW MANCHESTER, NH                   | 1 | 1 | 1 |   | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 |   | 1 | 12 | 11 |
| Continuous | M26 | <a href="#">01094000</a> | SOUHEGAN RIVER AT MERRIMACK, NH                                    | 1 | 1 | 1 |   | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 |   | 1 | 12 | 10 |
| Continuous | M28 | <a href="#">01100505</a> | SPICKET RIVER AT NORTH SALEM, NH                                   | 1 |   | 1 |   |   |   | 1 |   | 1 | 2 | 2 | 1 |   | 1 | 8  | 6  |
| PR         | M28 | <a href="#">01100561</a> | SPICKET RIVER NEAR METHUEN, MA (partial record)                    | 1 |   |   |   | 1 |   | 1 |   | 1 | 2 | 2 | 1 |   | 1 | 8  | 6  |



Appendix A – Table 2 – Existing Gages User Rankings

|                      |     |                           |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |    |
|----------------------|-----|---------------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|
| Closing - Continuous | M28 | <a href="#">011005605</a> | POLICY BR @ I-93N REST STOP ENT RAMP, NR SALEM, NH                   | 1 |   |   |   |   |   | 1 |   | 2 | 2 | 2 | 1 |   | 1 | 7  | 4  |
| Continuous           | M29 | <a href="#">010965852</a> | BEAVER BROOK AT NORTH PELHAM, NH                                     | 1 |   | 1 | 1 |   |   | 1 |   | 1 | 2 | 2 | 1 |   | 1 | 9  | 7  |
| Continuous           | M3  | <a href="#">1076000</a>   | BAKER RIVER NEAR RUMNEY, NH  | 1 | 1 | 1 |   | 1 |   | 2 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 12 | 9  |
| Continuous           | M4  | <a href="#">1076500</a>   | PEMIGEWASSET RIVER AT PLYMOUTH, NH                                   | 1 | 1 | 1 |   | 1 | 1 | 1 | 2 | 1 | 2 | 1 |   | 1 | 1 | 12 | 10 |
| HDCN                 | M5  | <a href="#">ASHNH</a>     | Squam River at Ashland, N.H. (formerly 01077000)                     | 1 | 1 | 1 |   |   |   | 1 |   | 1 | 1 | 2 |   |   | 1 | 8  | 7  |
| HDCN                 | M6  | <a href="#">NFLNH</a>     | Newfound Lake Dam (formerly 01077500 Newfound Lake Near Bristol, NH) | 1 |   |   |   |   |   |   | 1 | 1 | 1 | 2 |   |   | 1 | 6  | 5  |
| Continuous           | M7  | <a href="#">01078000</a>  | SMITH RIVER NEAR BRISTOL, NH   | 1 |   | 1 | 1 | 1 |   | 2 | 1 | 1 | 2 | 2 |   |   | 1 | 10 | 7  |
| HDCN                 | M9  | <a href="#">LKPN3</a>     | Lake Winnepesaukee Outlet at Lakeport, N.H. (formerly 01080500)      | 1 |   |   |   |   |   |   | 1 | 1 | 1 | 2 |   |   | 1 | 6  | 5  |
| Continuous           | S3  | <a href="#">1064500</a>   | Saco River near Conway, NH   | 1 | 1 | 1 | 1 |   | 1 | 2 | 1 | 1 | 2 | 1 | 1 |   | 1 | 12 | 10 |
| Continuous           | S5  | <a href="#">01064801</a>  | BEARCAMP RIVER AT SOUTH TAMWORTH, NH                                 | 1 |   | 1 | 1 |   |   | 2 |   | 1 | 2 | 2 |   |   | 1 | 8  | 5  |
| HDCN                 | S8  | <a href="#">OSRNL</a>     | Ossipee River at Effingham Falls, N.H. (formerly 01065000)           | 1 |   | 1 |   |   |   | 2 |   | 1 | 1 | 2 |   |   | 1 | 7  | 5  |

(6) Index - for this study USGS HUC-10 numbers were renamed with the first letter of their major basin and sequential numbering.

A=Androscoggin, C=Coastal, Ct=Connecticut, M=Merrimack, S=Saco

(1) Continuous = USGS continuous record gage (measurements accurate for full range of high and low flows)

(2) HDCN = Hydrologic Data Collection Network (NHDES Dam Bureau station)

(3) Closing - Continuous = Continuous gages without funding after either 2006 or 2007

(4) Stage-only = USGS water height measurement station

(5) PR = USGS partial record gage (measurements accurate only for some of the data such as the high or low flows)

Appendix A – Table 3 – Data uses of Proposed Gages

|   |   |  |   | Real-time Flow Data Needs  |                      |                   |   | Historical Flow Data Needs              |   |  |                                       | Proposer    |
|---|---|--|---|----------------------------|----------------------|-------------------|---|---|---|--|---------------------------------------|-------------|
| <b>Table A3 - Data Uses of Proposed Gages</b> |   |  |   | Flood control and response | Reservoir management | Flow availability | Water related permit conditions implementation and monitoring | Water availability and flow assessments | Hydrologic trends and statistical assessments such as climate change, and regression analysis for ungaged streams | Hydraulic design and geomorphology studies | Waste and Water Chemistry assessments |             |
| Priority (1, 2, or 3)*                        | Proposed Gage is (T) Temporary or (P) Permanent | Proposed Gage is (C) Continuous or (PR) Partial Record | Description of gage: (Include details on any of the following applicable to the proposed gage) location, ecoregion, physiographic region, drainage area, slope, elevation, %urban, %forested, precipitation. Include written description of the purposes for the gage. Describe whether the proposed gage is currently needed, upgrade to an existing gage, would replace a less adequate gage, or is an anticipated future need. |                            |                      |                   |   |   |   |  |                                       |             |
| 3   | P   | C  | Moose River, Gorham area, trib. to Androscoggin abv Town  | X                          |                      | X                 |   | X                                       | X   | X  |                                       | USGS        |
| 1   | P   | C  | Peabody River, Gorham area, trib. to Androscoggin bel. Town   | X                          |                      | X                 |   | X                                       | X   | X  |                                       | USGS        |
| 1   | P   | C  | 01072870 Isinglass River nr Dover, NH, DA=73.6, NH Designated River, upstream from landfill site.   |                            |                      | X                 | X   | X                                       |   | X  | X                                     | USGS        |
| 3   | P   | C  | Located on the upper <b>Isinglass</b> . There is a short (3 mile) segment with no registered water users on the Designated River, but the river has a large water withdrawal on a tributary.  |                            |                      |                   | X   | X                                       |   |  |                                       | DES WMB ISF |
| 3   | P   | C  | <b>Isinglass River:</b> Gage needed on upper river (currently gaged near Dover)<br><i>Details:</i> N/A (Note: DES high-priority watershed for restoration; inadequate drainage area coverage on upper river and one water user on a tributary that impacts or is impacted by flow regime according to DES)<br><i>Purpose:</i> Monitor flow on Designated river<br><i>Need:</i> Anticipated future gage need                       |                            |                      |                   | X   | X                                       | X   |  |                                       | RMLAC       |
| 1   | P   | C  | 1072850 Mohawk R. Center Strafford, NH  |                            |                      |                   |   |   | X   | X  |                                       | NHGS        |

\* Priority ranking: 1 = Currently needed, 2 = Replaces a less adequate gage; 3 = Anticipated future need

Appendix A – Table 3 – Data uses of Proposed Gages

|   |   |   |   |   |  |   |   |   |   |   |   |                                     |
|---|---|---|---|---|--|---|---|---|---|---|---|-------------------------------------|
| 3 | P | C | Lamprey River upstream of Raymond. Need is related to NPDES permitting and compliance issues for possible new POTW in Raymond   |   |  | X | X |   | X |   | X | DES - Wastewater Engineering Bureau |
| 1 | P | C | Upper Lamprey River near Epping, NH, supplement to Packers Falls gage   |   |  | X |   | X |   |   |   | Consulting (NAI)                    |
| 1 | P | C | Lamprey River NW corner Raymond, NH, encompassing HUC12 010600030702 and HUC12 010600030701   |   |  |   |   |   | X |   |   | NHGS                                |
| 1 | P | C | 01073460 North River nr Lee, NH, DA=35.6, unregulated tributary to the Lamprey River.   |   |  | X | X | X | X | X |   | USGS                                |
| 1 | P | C | Squamscott River, Newmarket, Newfields, Exeter area, coastal, various water uses  | X |  | X | X | X | X | X | X | USGS                                |
| 3 | P | C | Located on the upper <b>Exeter</b> River to support water use assessments on the upper 9 miles of river with one registered water user.   |   |  |   | X | X |   |   |   | DES WMB ISF                         |
| 3 | P | C | <b>Exeter River:</b> Gage needed on upper river (currently gaged near Brentwood)<br><i>Details:</i> N/A (Note: DES high-priority watershed for restoration; inadequate drainage area coverage on upper river and one water user that impacts or is impacted by flow regime according to DES)<br><i>Purpose:</i> Monitor flow on Designated river<br><i>Need:</i> Anticipated future gage need |   |  |   | X | X | X |   |   | RMLAC                               |
| 3 | P | C | Dudley Br. former USGS gage 1073600, 0 - 25 mi <sup>2</sup>   |   |  |   |   |   | X |   |   | NH Stream Team                      |
| 1 | P | C | 1073600 Dudley Br. Exeter, NH   |   |  |   |   |   | X | X |   | NHGS                                |
| 1 | P | C | 01073785 Winnicut River nr Portsmouth, NH, DA=14.1, located near mouth at 1st dam at head of tide   |   |  | X | X | X |   | X |   | USGS                                |
| 3 | P | C | Big Br. former USGS gage 1127880, 0 - 25 mi <sup>2</sup>  |   |  |   |   |   | X |   |   | NH Stream Team                      |
| 3 | P | C | Located on the upper reaches (18 miles) of the <b>Connecticut</b> River. There are no registered water users. Low priority.   |   |  |   | X | X |   |   |   | DES WMB ISF                         |
| 3 | P | C | <b>Connecticut River:</b> Gage needed on upper river (currently gaged at six downstream sites)<br><i>Details:</i> N/A (Note: DES high-priority watershed for protection; inadequate drainage area coverage on upper river according to DES; recreation area)<br><i>Purpose:</i> Monitor flow on Designated river<br><i>Need:</i> Anticipated future gage need                                 |   |  |   | X | X | X |   |   | RMLAC                               |
| 3 | P | C | Gale River, unregulated site  |   |  | X | X | X | X | X |   | USGS                                |

\* Priority ranking: 1 = Currently needed, 2 = Replaces a less adequate gage; 3 = Anticipated future need

Appendix A – Table 3 – Data uses of Proposed Gages

|   |   |   |  |   |  |   |   |   |   |   |   |                                     |
|---|---|---|--|---|--|---|---|---|---|---|---|-------------------------------------|
| 1 | P | C | Ammonoosuc River - Bethlehem - coverage lacking in a high growth potential area  |   |  | X | X |   |   |   |   | DES WMB Ambient and 401             |
| 3 | P | C | Ammonoosuc River near Bath (reactivate gage). Need is related to NPDES permitting and compliance issues with the Littleton POTW and Lisbon POTW  |   |  | X | X |   | X |   | X | DES - Wastewater Engineering Bureau |
| 1 | P | C | 01138000 Ammonoosuc River nr Bath, NH, DA=395, unregulated   | X |  | X |   | X | X | X |   | USGS                                |
| 3 | P | C | Wild Ammonoosuc River, unregulated high elev. site   |   |  | X | X | X | X | X |   | USGS                                |
| 3 | P | C | Eastman Brook in Piermont upstream of Piermont POTW. Need is related to NPDES permitting and compliance issues with the Piermont POTW.   |   |  | X | X |   | X |   | X | DES - Wastewater Engineering Bureau |
| 3 | P | C | Mink Br. former USGS gage 1141800, 0 - 25 mi^2   |   |  |   |   |   | X |   |   | NH Stream Team                      |
| 1 | P | C | 1141800 Mink Br. Etna, NH  |   |  |   |   |   | X | X |   | NHGS                                |
| 3 | P | C | Blood Brook in Plainfield upstream of Meriden POTW. Need is related to NPDES permitting and compliance issues with the Meriden POTW.   |   |  | X | X |   | X |   | X | DES - Wastewater Engineering Bureau |
| 1 | P | C | Sugar River - Sunapee - coverage lacking in a high growth potential area   |   |  | X | X |   |   |   |   | DES WMB Ambient and 401             |
| 1 | P | C | Cold River near Cold River, NH   |   |  | X |   | X |   |   |   | Consulting (NAI)                    |
| 3 | P | C | Cold R. former USGS gage 1155000, >80 - 150 mi^2   |   |  |   |   |   | X |   |   | NH Stream Team                      |
| 1 | P | C | 01155000 Cold River at Drewsville, NH, DA= 82.7, unregulated watershed, NH Designated River  | X |  | X |   | X | X | X |   | USGS                                |
| 3 | P | C | Located on the <b>Cold</b> River (Former USGS gage at Drewsville). Only one small water use currently registered. Assessments currently rely on a surrogate gage in Vermont. However, may represent a small, relatively unimpacted watershed for a reference gage. |   |  |   | X | X |   |   |   | DES WMB ISF                         |

\* Priority ranking: 1 = Currently needed, 2 = Replaces a less adequate gage; 3 = Anticipated future need

Appendix A – Table 3 – Data uses of Proposed Gages

|   |   |   |   |   |   |   |   |   |   |   |   |                                     |
|---|---|---|---|---|---|---|---|---|---|---|---|-------------------------------------|
|   |   |   | <b>Cold River:</b> At least one gage needed (no gages at present)<br><i>Details:</i> Rural/unregulated; flash flood-prone; high-priority USFWS salmon nursery; small-moderate drainage; DES high-priority watershed for protection; wildlife and plant habitats of state/national/global significance; recreational uses; active VRAP program<br><i>Purpose:</i> Monitor flow on Designated river<br><i>Need:</i> Currently needed gage(s) - including one at Drewsville, NH (historical gaging site) |   |   |   |   |   |   |   |   |                                     |
| 1 | P | C |   | X | X | X | X | X | X | X | X | RMLAC                               |
| 1 | P | C | 1155000 Cold R. Drewsville, NH  |   |   |   |   |   |   | X |   | NHGS                                |
| 3 | P | C | Ashuelot R. former USGS gage 1157000, >25 - 80 mi <sup>2</sup>  |   |   |   |   |   | X |   |   | NH Stream Team                      |
| 1 | P | C | 01157000 Ashuelot River nr Gilsum, NH, DA=71.1, unregulated watershed, headwaters of NH Designated River  | X | X | X |   | X | X | X |   | USGS                                |
| 3 | P | C | Located on the upper <b>Ashuelot</b> River. Upper river has several dams, few water users and 28 miles that are poorly gaged. May also represent a small, relatively unimpacted watershed for a reference gage.   |   |   |   | X | X |   |   |   | DES WMB ISF                         |
| 3 | P | C | <b>Ashuelot River:</b> Gage needed on upper river (current gages at several downstream sites)<br><i>Details:</i> N/A (Note: DES high-priority watershed for protection; "threatened"; inadequate drainage area coverage on upper river and several water users/dams that impact or are impacted by flow regime according to DES)<br><i>Purpose:</i> Monitor flow on Designated river<br><i>Need:</i> Anticipated future gage need   |   |   |   | X | X | X |   |   | RMLAC                               |
| 1 | T | C | Beaver Brook, Keene, DA=5.9, flows through center of Keene, trib. to Ashuelot River   | X |   |   | X | X | X | X |   | USGS                                |
| 1 | P | C | South Branch Ashuelot near Webb (reactivate or install new gage higher in watershed). Need is related to NPDES permitting and compliance issues with the Troy POTW  |   |   | X | X |   | X |   | X | DES - Wastewater Engineering Bureau |
| 3 | P | C | S.Branch Ashuelot R. former USGS gage 1160000, >25 - 80 mi <sup>2</sup>   |   |   |   |   |   | X |   |   | NH Stream Team                      |
| 1 | P | C | 01160000 South Br, Ashuelot River nr Marlboro, NH, DA=36.0, unregulated watershed,  | X | X | X |   | X | X | X |   | USGS                                |
| 1 | P | C | 1160000 S.Branch Ashuelot R. Webb, nr Marlborough, NH   |   |   |   |   |   | X | X |   | NHGS                                |
| 3 | P | C | Hall Stream former USGS gage 1129300, >80 - 150 mi <sup>2</sup>   |   |   |   |   |   | X |   |   | NH Stream Team                      |

\* Priority ranking: 1 = Currently needed, 2 = Replaces a less adequate gage; 3 = Anticipated future need

Appendix A – Table 3 – Data uses of Proposed Gages

|   |   |   |  |   |   |   |   |   |   |   |   |                                     |
|---|---|---|--|---|---|---|---|---|---|---|---|-------------------------------------|
| 3 | P | C | Mohawk R. former USGS gage 1129440, >25 - 80 mi^2  |   |   |   |   |   | X |   |   | NH Stream Team                      |
| 1 | P | C | 01129440 Mohawk River nr Colebrook, NH, DA=36.7, unregulated tributary to CT R.  | X | X | X |   | X | X | X |   | USGS                                |
| 1 | P | C | Upper Ammonoosuc River near Groveton (reactivate gage). Need is related to NPDES permitting and compliance issues with the Groveton POTW and Wausau Paper  |   |   | X | X |   | X |   | X | DES - Wastewater Engineering Bureau |
| 3 | P | C | Upper Ammonoosuc River former USGS gage 1130000, >150 mi^2   |   |   |   |   |   | X |   |   | NH Stream Team                      |
| 1 | P | C | 01130000 Upper Ammonoosuc River nr Groveton, NH, DA=232, upstream diversion from Berlin,   | X | X | X |   | X | X | X |   | USGS                                |
| 1 | P | C | 1130000 Upper Ammonoosuc R. near Groveton, NH  |   |   |   |   |   | X | X |   | NHGS                                |
| 3 | T | C | Israel River , Lancaster/Jefferson area, unregulated site  | X |   | X | X | X | X | X | X | USGS                                |
| 1 | P | C | John's River in Whitefield upstream of the Whitefield POTW. Need is related to NPDES permitting and compliance issues with the Whitefield POTW.  |   |   | X | X |   | X |   | X | DES - Wastewater Engineering Bureau |
| 3 | P | C | Johns River, unregulated site  |   |   | X | X | X | X | X |   | USGS                                |
| 1 | P | C | Hubbard Brook, Woodstock, NH. A gaging site is proposed to that will be cooperatively operated with the USDA Forest Service. The Hubbard Brook Experimental Forest (HBEF) was established in 1955 to improve understanding of watershed management in New England through the establishment of small (<175 ac) gaged watersheds and experiments. The small watershed concept pioneered at HBEF has been an extremely valuable research tool and continues to have high scientific value.<br>However, there is a pressing need to resolve how observations of hydrologic processes translate from small watersheds to river basins in order to address environmental issues at the landscape/management scale. The proposed gage location drains a 100% forested watershed that is about 8000 acres in the southern White Mountains – currently smaller than any other gage in NH. The site is 740 ft in elevation and situated in deep water-worked glacial deposits; however, the control channel section is largely bedrock. This proposed site would be instrumental in developing an understanding a predicting in ungaged basins due to its size (intermediate between the HBEF small | X |   |   |   |   |   | X | X | PSU                                 |

\* Priority ranking: 1 = Currently needed, 2 = Replaces a less adequate gage; 3 = Anticipated future need

Appendix A – Table 3 – Data uses of Proposed Gages

|   |   |   |   |   |   |   |   |   |   |   |   |                         |
|---|---|---|---|---|---|---|---|---|---|---|---|-------------------------|
|   |   |   | watersheds and typical USGS gages) and the wealth of sub-basin research history.  |   |   |   |   |   |   |   |   |                         |
| 3 | P | C | There are several short segments on the <b>Contoocook</b> that are not well covered with a gage. Also, there are many water users on this river: there are several dams that cause ungaged variations in river flows.   |   |   |   | X | X |   |   |   | DES WMB ISF             |
| 3 | P | C | Beards Br. former USGS gage 1084500, >25 - 80 mi <sup>2</sup>   |   |   |   |   |   | X |   |   | NH Stream Team          |
| 1 | P | C | 01084500 Beards Bk nr Hillsborough, NH, DA=55.4, unregulated trib to Contoocook   |   |   | X | X | X | X | X |   | USGS                    |
| 1 | P | C | 1084500 Beards Br. Hillsboro, NH  |   |   |   |   |   | X | X |   | NHGS                    |
| 3 | P | C | Located on the <b>North Branch of the Contoocook</b> . Designated River with three water users (two dams and one small user.).  |   |   |   | X | X |   |   |   | DES WMB ISF             |
| 3 | P | C | <b>Contoocook River:</b> Gage needed on North Branch (other segments are currently gaged)<br><i>Details:</i> N/A (Note: DES high-priority watershed for restoration; "threatened"; number of water users and dams that impact or are impacted by flow regime according to DES)<br><i>Purpose:</i> Monitor flow on Designated river<br><i>Need:</i> Anticipated future gage need |   |   |   | X | X | X |   |   | RMLAC                   |
| 3 | P | C | W. Br. Warner R. former USGS gage 1085800, 0 - 25 mi <sup>2</sup>   |   |   |   |   |   | X |   |   | NH Stream Team          |
| 1 | P | C | 01085800 West Branch Warner River nr Bradford, NH, DA= 5.75, unregulated small watershed  |   |   | X | X | X | X | X |   | USGS                    |
| 1 | P | C | 1085800 W. Br. Warner R near Bradford, NH   |   |   |   |   |   | X | X |   | NHGS                    |
| 1 | P | C | 01088000 Contoocook River nr Penacook, NH, DA=766, nr mouth, NH Designated River  | X | X | X | X | X | X | X | X | USGS                    |
| 3 | P | C | There are several short segments on the <b>Contoocook</b> that are not well covered with a gage. Also, there are many water users on this river: there are several dams that cause ungaged variations in river flows.   |   |   |   | X | X |   |   |   | DES WMB ISF             |
| 1 | P | C | Add average daily Q at the Merrimack River at Concord, NH gage, which is currently stage only. Supports flow assessments related to the PSNH Amoskeag releases.   |   |   |   | X |   |   |   |   | DES WMB Ambient and 401 |
| 3 | P | C | Located on the <b>Merrimack</b> River near Concord. There are many large withdrawals and returns the closest gages are at Franklin and Manchester.  |   |   |   | X | X |   |   |   | DES WMB ISF             |

\* Priority ranking: 1 = Currently needed, 2 = Replaces a less adequate gage; 3 = Anticipated future need

Appendix A – Table 3 – Data uses of Proposed Gages

|   |   |   |   |    |    |   |   |   |   |   |   |                                     |
|---|---|---|---|----|----|---|---|---|---|---|---|-------------------------------------|
| 3 | P | C | <b>Merrimack River:</b> Gage needed in Concord area (Franklin/Manchester = nearest gages)<br><i>Details:</i> N/A (Note: DES high-priority watershed for restoration; "threatened"; many water users in this area that impact or are impacted by flow regime according to DES)<br><i>Purpose:</i> Monitor flow on Designated river<br><i>Need:</i> Anticipated future gage need - possible upgrade to stage-only station in Concord  |    |    |   | X | X | X |   |   | RMLAC                               |
| 1 | P | C | Suncook River (reactivate gage in North Chichester or install new one in Pittsfield upstream of POTW). Need is related to NPDES permitting and compliance issues with the Pittsfield POTW. Recent flooding issues should also justify gage.   |    |    | X | X |   | X |   | X | DES - Wastewater Engineering Bureau |
| 1 | P | C | Suncook River, Allenstown/Epsom/Pittsfield area, regulated stream with possible water uses throughout   | X  | X  | X | X | X | X | X | X | USGS                                |
| 3 | P | C | <b>S.B.</b> Piscataquog R. former USGS gage 1091000, >80 - 150 mi <sup>2</sup>  |    |    |   |   |   | x |   |   | NH Stream Team                      |
| 1 | P | C | <b>South</b> and/or Middle Branches of the Piscataquog River, mostly unregulated, NH Designated River   | X  |    | X | X | X | X | X |   | USGS                                |
| 1 | P | C | <b>South</b> One or more gages located on any of the three branches and main stem of the <b>Piscataquog</b> River system. No continuous record gages on any of the three Designated branches or Designated main stem--two partial record gages near dams that provide high flow information. Middle Branch has no registered water users and one active dam and may represent a relatively unimpacted river segment. North Branch, South Branch, and main stem all do have some registered water users. All three branches are partly or completely classified as Natural under the Rivers Management and Protection Program. |    |    |   | X | X |   |   |   | DES WMB ISF                         |
| 1 | P | C | <b>SB</b> Piscataquog gage is of interest as it was a basis for our flow policy (ABF).  |    |    |   |   | X |   |   |   | USF&W                               |
| 1 | P | C | <b>SB Piscataquog River:</b> At least one gage needed (two PR gages at present)<br><i>Details:</i> N/A (Note: DES high-priority watershed for restoration; "threatened"; number of water users and dams that impact or are impacted by flow regime according to DES)<br><i>Purpose:</i> Monitor flow on Designated river<br><i>Need:</i> Currently needed gage(s) - possible upgrade/replacement of partial record gage(s) - consider each of three branches plus main stem   | X? | X? | X | X | X | X | X | X | RMLAC                               |
| 1 | P | C | 1091000 S.B. Piscataquog R. near Goffstown, NH  |    |    |   |   |   | X | X |   | NHGS                                |

\* Priority ranking: 1 = Currently needed, 2 = Replaces a less adequate gage; 3 = Anticipated future need



Appendix A – Table 3 – Data uses of Proposed Gages

|   |   |   |  |    |    |   |   |   |   |   |   |             |
|---|---|---|--|----|----|---|---|---|---|---|---|-------------|
| 1 |   |   | South and/or <b>Middle Branches</b> of the Piscataquog River, mostly unregulated, NH Designated River  | X  |    | X | X | X | X | X |   | USGS        |
| 1 | P | C | <b>Middle</b> - One or more gages located on any of the three branches and main stem of the <b>Piscataquog</b> River system. No continuous record gages on any of the three Designated branches or Designated main stem--two partial record gages near dams that provide high flow information. Middle Branch has no registered water users and one active dam and may represent a relatively unimpacted river segment. North Branch, South Branch, and main stem all do have some registered water users. All three branches are partly or completely classified as Natural under the Rivers Management and Protection Program. |    |    |   | X | X |   |   |   | DES WMB ISF |
| 1 | P | C | <b>Middle Branch Piscataquog River:</b> At least one gage needed (two PR gages at present)<br><i>Details:</i> N/A (Note: DES high-priority watershed for restoration; "threatened"; number of water users and dams that impact or are impacted by flow regime according to DES)<br><i>Purpose:</i> Monitor flow on Designated river<br><i>Need:</i> Currently needed gage(s) - possible upgrade/replacement of partial record gage(s) - consider each of three branches plus main stem   | X? | X? | X | X | X | X | X | X | RMLAC       |
| 1 | P | C | <b>North</b> Branch River, natural watershed, NH Designated River  | X  |    | X | X | X | X | X |   | USGS        |
| 1 | P | C | <b>North</b> One or more gages located on any of the three branches and main stem of the <b>Piscataquog</b> River system. No continuous record gages on any of the three Designated branches or Designated main stem--two partial record gages near dams that provide high flow information. Middle Branch has no registered water users and one active dam and may represent a relatively unimpacted river segment. North Branch, South Branch, and main stem all do have some registered water users. All three branches are partly or completely classified as Natural under the Rivers Management and Protection Program.    |    |    |   | X | X |   |   |   | DES WMB ISF |
| 1 | P | C | <b>NB Piscataquog River:</b> At least one gage needed (two PR gages at present)<br><i>Details:</i> N/A (Note: DES high-priority watershed for restoration; "threatened"; number of water users and dams that impact or are impacted by flow regime according to DES)<br><i>Purpose:</i> Monitor flow on Designated river<br><i>Need:</i> Currently needed gage(s) - possible upgrade/replacement of partial record gage(s) - consider each of three branches plus main stem  | X? | X? | X | X | X | X | X | X | RMLAC       |

\* Priority ranking: 1 = Currently needed, 2 = Replaces a less adequate gage; 3 = Anticipated future need

Appendix A – Table 3 – Data uses of Proposed Gages

|   |   |   |   |    |    |   |   |   |   |   |   |                                     |
|---|---|---|---|----|----|---|---|---|---|---|---|-------------------------------------|
| 1 | P | C | One or more gages located on any of the three branches and main stem of the <b>Piscataquog</b> River system. No continuous record gages on any of the three Designated branches or Designated <b>main stem</b> --two partial record gages near dams that provide high flow in   |    |    |   | X | X |   |   |   | DES WMB ISF                         |
| 1 | P | C | <b>Piscataquog River:</b> At least one gage needed (two PR gages at present)<br><i>Details:</i> N/A (Note: DES high-priority watershed for restoration; "threatened"; number of water users and dams that impact or are impacted by flow regime according to DES)<br><i>Purpose:</i> Monitor flow on Designated river<br><i>Need:</i> Currently needed gage(s) - possible upgrade/replacement of partial record gage(s) - consider each of three branches plus <b>main stem</b> | X? | X? | X | X | X | X | X | X | RMLAC                               |
| 1 | P | C | Souhegan River in Wilton area. Need is related to NPDES permitting and compliance issues with the Greenville POTW and the Milford POTW  |    |    | X | X |   | X |   | X | DES - Wastewater Engineering Bureau |
| 1 | P | C | Souhegan River, above Milford, headwater site, some regulation and water uses above and below   | X  | X  | X | X | X | X | X |   | USGS                                |
| 1 | P | C | Located on the upper <b>Souhegan</b> to support the Water Management Plan under the Instream Flow Pilot Program. Several registered water users. The existing gage is low in the watershed and should be supported by a gage in the upper part of the watershed with  |    |    |   | X | X |   |   |   | DES WMB ISF                         |
| 1 | P | C | Upper Souhegan River near Greenville, NH, replace Stoney Brook  |    |    | X |   | X |   |   |   | Consulting (NAI)                    |
| 3 | P | C | <b>Souhegan River:</b> Gage needed on upper river (lower river is currently gaged)<br><i>Details:</i> N/A (Note: DES high-priority watershed for restoration; "threatened"; inadequate drainage area coverage on upper river and a number of water users that impact or are impacted by flow regime according to DES)<br><i>Purpose:</i> Monitor flow on Designated river<br><i>Need:</i> Anticipated future gage need  |    |    |   | X | X | X |   |   | RMLAC                               |
| 3 | P | C | Stony Br. Trib. former USGS gage 1093800, 0 - 25 mi^2   |    |    |   |   |   | X |   |   | NH Stream Team                      |
| 1 | P | C | 01093800 Stony Brook Tributary nr Temple, NH, DA=3.6, unregulated trib. To Souhegan   |    |    | X | X | X | X | X |   | USGS                                |
| 1 | P | C | 1093800 Stony Br. Trib. near Temple, NH   |    |    |   |   |   | X | X |   | NHGS                                |

\* Priority ranking: 1 = Currently needed, 2 = Replaces a less adequate gage; 3 = Anticipated future need

Appendix A – Table 3 – Data uses of Proposed Gages

|   |   |   |   |   |   |   |   |   |   |   |   |  |
|---|---|---|---|---|---|---|---|---|---|---|---|--|
| 1 | P | C | Beaver Brook - Derry - Water chemistry loading assessments for chloride related to I-93   |   |   |   | X |   |   |   |   | DES WMB<br>Ambient and<br>401                |
| 3 | P | C | Stevens Br. former USGS gage 1075800, 0 - 25 mi^2   |   |   |   |   |   | X |   |   | NH Stream<br>Team                            |
| 1 | P | C | 1075800 Stevens Br. Wentworth, NH   |   |   |   |   |   | X | X |   | NHGS   |
| 3 | T | C | 01075500 Baker River nr Wentworth, NH, DA=58.8, unregulated watershed.  | X |   | X |   | X | X | X |   | USGS   |
| 1 | P | C | Powwow River, Kingston/South Hampton area, regulated stream   | X | X | X | X | X | X | X | X | USGS   |
| 3 | P | C | Mad River in Waterville Valley. Need is related to NPDES permitting and compliance issues with the Waterville Valley POTW   |   |   | X | X |   | X |   | X | DES -<br>Wastewater<br>Engineering<br>Bureau |
| 1 | P | C | Mad River, Thornton/Waterville Valley area, unregulated watershed   |   |   | X | X | X | X | X |   | USGS   |
| 3 | P | C | Cockermouth River, natural watershed, inflow to Newfound lake   | X | X | X | X | X | X | X |   | USGS   |
| 3 | P | C | Ellis R. former USGS gage 1064300, 0 - 25 mi^2  |   |   |   |   |   | x |   |   | NH Stream<br>Team                            |
| 1 | P | C | 01064300 Ellis River nr Jackson, NH, DA=10.9, unregulated, small high elevation watershed   |   |   | X |   | X | X | X |   | USGS   |
| 1 | P | C | 1064300 Ellis R. near Jackson, NH   |   |   |   |   |   | X | X |   | NHGS   |
| 3 | P | C | Rocky Branch, unregulated watershed and trib. to Saco R near N Conway   |   |   | X |   | X | X | X |   | USGS   |
| 3 | P | C | Located on the upper <b>Saco</b> River. Several water user in the lower third of the ungaged, upper 21 miles of the Designated River that would be better supported by a gage in that reach.  |   |   |   | X | X |   |   |   | DES WMB<br>ISF                               |
| 3 | P | C | <b>Saco River:</b> Gage needed on upper river (one gage currently in Conway)<br><i>Details:</i> N/A (Note: DES high-priority watershed for protection and restoration; inadequate drainage area coverage on upper river and a number of water users that impact or are impacted by flow regime according to DES)<br><i>Purpose:</i> Monitor flow on Designated river<br><i>Need:</i> Anticipated future gage need |   |   |   | X | X | X |   |   | RMLAC  |
| 1 | P | C | Swift River near Conway, NH   |   |   | X |   | X | X | X |   | Consulting<br>(NAI)                          |
| 3 | P | C | Swift River, unregulated watershed and trib. To Saco R near Conway  |   |   | X |   | X | X | X |   | USGS   |

\* Priority ranking: 1 = Currently needed, 2 = Replaces a less adequate gage; 3 = Anticipated future need

Appendix A – Table 3 – Data uses of Proposed Gages

|   |   |   |   |    |    |   |   |   |   |   |   |                |
|---|---|---|---|----|----|---|---|---|---|---|---|----------------|
| 1 | P | C | <b>Swift River:</b> At least one gage needed (no gages at present)<br><i>Details:</i> N/A (Note: DES high-priority watershed for protection)<br><i>Purpose:</i> Monitor flow on Designated river<br><i>Need:</i> Currently needed gage(s) | X? | X? | X | X | X | X | X | X | RMLAC          |
| 1 | P | C | Located on the <b>Swift</b> River. Very little water use and no dams. Higher precipitation watershed fills gap in this coverage.  |    |    |   | X | X |   |   |   | DES WMB ISF    |
| 3 | P | C | Lucy Br. former USGS gage 1064400, 0 - 25 mi <sup>2</sup>   |    |    |   |   |   | X |   |   | NH Stream Team |
| 1 | P | C | 1064400 Lucy Br. near No. Conway, NH  |    |    |   |   |   | X | X |   | NHGS           |
| 3 | P | C | Wild R. former USGS gage 1054175, >25 - 80 mi <sup>2</sup> Gilead Maine   |    |    |   |   |   | X |   |   | NH Stream Team |
| 3 | P | C | Moss Br. former USGS gage 1165500, 0 - 25 mi <sup>2</sup> Wendell Depot MA  |    |    |   |   |   | X |   |   | NH Stream Team |

\* Priority ranking: 1 = Currently needed, 2 = Replaces a less adequate gage; 3 = Anticipated future need

## Appendix A – HUC-10 Index Key

| <b>Table A4-HUC-10 Index Key</b> |             |  |
|----------------------------------|-------------|--|
| HUC Index                        | USGS HUC_10 | HUC_10_NAME  |
| A1                               | 0104000102  | UMBAGOG LAKE DRAINAGE                                      |
| A2                               | 0104000103  | AZISCOHOS LAKE DRAINAGE                                    |
| A3                               | 0104000104  | MAGALLOWAY RIVER   |
| A4                               | 0104000105  | CLEAR STREAM   |
| A5                               | 0104000106  | MIDDLE ANDROSCOGGIN RIVER                                  |
| A6                               | 0104000201  | GORHAM-SHELBURNE TRIBUTARIES                               |
| A7                               | 0104000202  | ANDROSCOGGIN RIVER AT RUMFORD POINT                        |
| C1                               | 0106000304  | SALMON FALLS RIVER   |
| C2                               | 0106000306  | COCHECO RIVER  |
| C3                               | 0106000307  | LAMPREY RIVER  |
| C4                               | 0106000308  | EXETER RIVER   |
| C5                               | 0106000309  | GREAT BAY DRAINAGE   |
| C6                               | 0106000310  | COASTAL DRAINAGE   |
| Ct1                              | 0108010101  | CONNECTICUT LAKES DRAINAGE                                 |
| Ct10                             | 0108010302  | CONNECTICUT RIVER-JOHNS RIVER TO AMMONOOSUC RIVER          |
| Ct11                             | 0108010303  | GALE RIVER   |
| Ct12                             | 0108010304  | AMMONOOSUC RIVER   |
| Ct13                             | 0108010305  | LOWER AMMONOOSUC RIVER                                     |
| Ct14                             | 0108010307  | CONNECTICUT RIVER-AMMONOOSUC RIVER TO WAITS RIVER          |
| Ct15                             | 0108010402  | CONNECTICUT RIVER-WAITS RIVER TO HEWES BROOK               |
| Ct16                             | 0108010404  | CONNECTICUT RIVER-OMPOMPANOOSUC RIVER TO WHITE RIVER       |
| Ct17                             | 0108010601  | MASCOMA RIVER  |
| Ct18                             | 0108010603  | CONNECTICUT RIVER-WHITE RIVER TO SUGAR RIVER               |
| Ct19                             | 0108010604  | SUGAR RIVER  |
| Ct2                              | 0108010102  | HEADWATER TRIBUTARIES                                      |
| Ct20                             | 0108010607  | CONNECTICUT RIVER-SUGAR RIVER TO BELLOWS FALLS             |
| Ct21                             | 0108010702  | COLD RIVER   |
| Ct22                             | 0108010705  | CONNECTICUT RIVER-BELLOWS FALLS TO VERNON DAM              |
| Ct23                             | 0108020101  | UPPER ASHUELOT RIVER                                       |
| Ct24                             | 0108020102  | THE BRANCH   |
| Ct25                             | 0108020103  | MIDDLE ASHUELOT RIVER                                      |
| Ct26                             | 0108020104  | LOWER ASHUELOT RIVER                                       |
| Ct27                             | 0108020105  | CONNECTICUT RIVER-VERNON DAM TO DEERFIELD RIVER            |
| Ct28                             | 0108020201  | UPPER MILLERS RIVER  |
| Ct29                             | 0108020202  | LOWER MILLERS RIVER  |
| Ct3                              | 0108010103  | MOHAWK RIVER-STEWARTSTOWN TRIBUTARIES                      |
| Ct4                              | 0108010104  | CONNECTICUT RIVER-MOHAWK RIVER TO NULHEGAN RIVER           |
| Ct5                              | 0108010106  | CONNECTICUT RIVER-NULHEGAN RIVER TO UPPER AMMONOOSUC RIVER |
| Ct6                              | 0108010107  | UPPER AMMONOOSUC RIVER                                     |
| Ct7                              | 0108010108  | ISRAEL RIVER   |

# Appendix A – HUC-10 Index Key

|     |            |   |
|-----|------------|---|
| Ct8 | 0108010109 | CONNECTICUT RIVER-UPPER AMMONOOSUC RIVER TO JOHNS RIVER |
| Ct9 | 0108010301 | JOHNS RIVER   |
| M1  | 0107000101 | EAST BRANCH PEMIGEWASSET RIVER                          |
| M10 | 0107000202 | WINNIPESAUKEE RIVER                                     |
| M11 | 0107000301 | UPPER CONTOOCCOOK RIVER                                 |
| M12 | 0107000302 | NORTH BRANCH  |
| M13 | 0107000303 | WARNER RIVER  |
| M14 | 0107000304 | BLACKWATER RIVER  |
| M15 | 0107000305 | LOWER CONTOOCCOOK RIVER                                 |
| M16 | 0107000403 | SQUANNACOOK RIVER                                       |
| M17 | 0107000404 | NASHUA RIVER-SQUANNACOOK RIVER TO MOUTH                 |
| M18 | 0107000601 | UPPER MERRIMACK RIVER                                   |
| M19 | 0107000602 | SOUCCOOK RIVER  |
| M2  | 0107000102 | UPPER PEMIGEWASSET RIVER                                |
| M20 | 0107000603 | CONCORD TRIBUTARIES                                     |
| M21 | 0107000604 | UPPER SUNCOOK RIVER                                     |
| M22 | 0107000605 | SUNCOOK RIVER   |
| M23 | 0107000606 | PISCATAQUOG RIVER                                       |
| M24 | 0107000607 | COHAS BROOK   |
| M25 | 0107000608 | MANCHESTER TRIBUTARIES                                  |
| M26 | 0107000609 | SOUHEGAN RIVER  |
| M27 | 0107000610 | LITCHFIELD-HUDSON TRIBUTARIES                           |
| M28 | 0107000611 | SPICKETT RIVER  |
| M29 | 0107000612 | MERRIMACK RIVER-NASHUA RIVER TO SHAWSHEEN RIVER         |
| M3  | 0107000103 | BAKER RIVER   |
| M30 | 0107000614 | MERRIMACK RIVER-SHAWSHEEN RIVER TO MOUTH                |
| M4  | 0107000104 | MIDDLE PEMIGEWASSET RIVER                               |
| M5  | 0107000105 | SQUAM RIVER   |
| M6  | 0107000106 | NEWFOUND RIVER  |
| M7  | 0107000107 | SMITH RIVER   |
| M8  | 0107000108 | LOWER PEMIGEWASSET RIVER                                |
| M9  | 0107000201 | LAKE WINNIPESAUKEE DRAINAGE                             |
| S1  | 0106000201 | UPPER SACO RIVER  |
| S2  | 0106000202 | SWIFT RIVER   |
| S3  | 0106000203 | CONWAY TRIBUTARIES                                      |
| S4  | 0106000204 | SACO RIVER-LOVEWELL POND                                |
| S5  | 0106000206 | BEARCAMP RIVER  |
| S6  | 0106000207 | PINE RIVER  |
| S7  | 0106000208 | OSSIPEE LAKE DRAINAGE                                   |
| S8  | 0106000209 | OSSIPEE RIVER   |
| S9  | 0106000210 | LITTLE OSSIPEE RIVER                                    |